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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,159	08/01/2001	Timothy James Jegla	018512-006810US	7080
20350	7590	05/04/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			PAK, MICHAEL D	
			ART UNIT	PAPER NUMBER
			1646	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/921,159	JEGLA ET AL.	
	Examiner	Art Unit	
	Michael Pak	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed 4 February 2005 has been entered. Claims 11-21 and 24-69 have been cancelled. Applicant pointed out that claim 10 was not included in the rejection. Examiner inadvertently left out claim 10 and would like to thank the applicant for the information.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Applicant's arguments filed 4 February 2005, have been fully considered but they are not found persuasive.
4. The Declaration of Timothy James Jegla and Julie Dickson Witzel filed on 4 February 2005 under 37 CFR 1.131 is sufficient to overcome the Curtis et al. reference.
5. The Declaration of Dr. Ken McCormack under 37 CFR 1.132 filed 4 February 2005 is insufficient to overcome the rejection of claims 1-10 based upon 35 USC 102(e) as set forth in the last Office action. The reasons and arguments have been set forth in the rejection below.

Claim Rejections - 35 USC § 101 and 35 USC § 112

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6. Claims 1-10 and 22-23 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility.

The reason for the rejection has been set forth in the previous office action.

Applicants argue that Declaration of Dr. McCormack provide evidence that Slo channels have real world use because it may be used in identifying therapeutic agents which can treat conditions related to abnormalities of cell excitatbility which have specific feature for potassium channels but not broad class of ion channels. The Declaration of Dr. McCormack uses the example of Calcium channels use in hypertension. However, it should be noted that potassium channels are a separate class of ion channels from calcium channels and is not necessarily predictive of use of potassium channels. Furthermore, as indicated by applicants and the Declaration there are many different types of potassium channels of which SLO species has a specific function. There is no nexus between the specific claimed species of SLO potassium channel and therapeutic approach through these channels. The claimed inventions lacks substantial utility for the reasons set forth in the previous office action.

7. Claims 1-10 and 22-23 also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a substantial

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asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Priority

8. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-10 and 22-23 of this application for the reasons provided above. See MPEP 706.02.

Claim Rejections - 35 USC § 102

9. Claims 1-3, 7-8, 10, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipate by Curagen Corporation (WO 01/90366).

Curagen Corporation (Curagen) disclose nucleic acid encoding SEQ ID NO:2618 which has 97% amino acid best local similarity with the claimed SEQ ID NO:4 amino acid region 293-396 (figure 59; page 2-4). Curagen disclose vectors and isolated host cells comprising the nucleic acid (pages 20-22).

Since the nucleic acid of Curagen has regions 100% identity with the claimed nucleic acid molecule the nucleic acid of Curagen will hybridize at the highest stringent conditions meeting the limitations of the claim.

10. Claims 1-3, 6-10 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipate by Wei et al. (US 2002/0048787).

Wei et al. disclose nucleic acid encoding SEQ ID NO:2 which has 75.1% amino acid sequence identity with the claimed SEQ ID NO:4 amino (figures 1-3; page 2, 14 and 20). Wei et al. disclose vectors and isolated host cells comprising the nucleic acid (pages 20-22).

Since the nucleic acid of Wei et al. has regions 100% identity with the claimed nucleic acid molecule the nucleic acid of Wei et al. will hybridize at the highest stringent conditions meeting the limitations of the claims. The large regions of 100% amino acid identity will bind specifically to antibodies generated against SEQ ID NO:4.

11. Claims 1, 3, 7-8, 10, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipate by Salkoff et al. (WO 99/20754).

Salkoff et al. disclose nucleic acid encoding SLO3 which has 22% amino acid best local similarity with the claimed SEQ ID NO:4 amino acid (figure 1; page 24-33). Salkoff et al. disclose vectors and isolated host cells comprising the nucleic acid (pages 33).

Since the nucleic acid of Salkoff et al. has regions of high identity with the claimed nucleic acid molecule the nucleic acid of Salkoff et al. will hybridize at the highest stringent conditions.

12. No claims are allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pak, whose telephone number is (571) 272-

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0879. The examiner can normally be reached on Monday through Friday from 8:30 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa, can be reached on (571) 272-0829.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



Michael Pak
Primary Patent Examiner
Art Unit 1646
29 April 2005